Existing Wellbore Diagram

Energy Acuman LLC BRC MADERA #001 API: 30-015-22372 Eddy County, New Mexico

Surface Casing

16" 65# @ 378 ft OH: 20'

Formation

Deleware Sand - 2050 feet Bone Springs - 5358 feet 3rd Bone Springs - 8475 feet Wolfcamp - 8810 feet

Penn - 9853 feet

Canyon - 10330 feet

Strawn - 10885 feet

Morrow - 11276 feet

Intermediate Casing 2 7.625" 26.4# @ 11,311 feet

OH: 9.875"

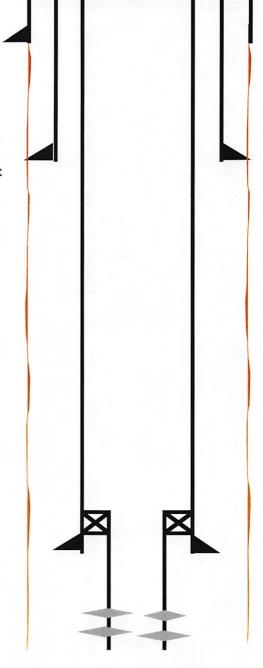
Perforations

11,697 feet - 11,706 feet

<u>Production Liner</u>

5" 18#

11,056 feet to 11,706 feet



Intermediate Casing 1 10.75" 40.5# @ 2618 feet OH: 14.25"

Proposed Wellbore Diagram

Energy Acuman LLC BRC MADERA #001 API: 30-015-22372 **Eddy County, New Mexico**

Plug 6

428 feet - Surface 428 foot plug 413 Sacks of Class C Cement

Plug 5

2668 feet - 2518 feet 150 foot plug 64 Sacks of Class C Cement

Plug 4

5408 feet - 5258 feet 150 foot plug 35 Sacks of Class H Cement

Plug 3

8525 feet - 8375 feet 150 foot plug 35 Sacks of Class H Cement

Plug 2

8860 feet - 8710 feet 150 foot plug 35 Sacks of Class H Cement

Plug 1

11,647 feet - 10,956 feet 691 foot plug 77 sacks of Class H Cement

Perforations

11,697 feet - 11,706 feet

16" 65#@ 378 ft

Surface Casing

OH: 20'

Formation Deleware Sand - 2050 feet

Bone Springs - 5358 feet 3rd Bone Springs - 8475 feet Wolfcamp - 8810 feet Penn - 9853 feet Canyon - 10330 feet Strawn - 10885 feet Morrow - 11276 feet

Intermediate Casing 2

7.625" 26.4# @ 11,311 feet OH: 9.875"

Production Liner

5" 18# 11,056 feet to 11,706 feet

Intermediate Casing 1 10.75" 40.5# @ 2618 feet

OH: 14.25"

CR @ 11,647 feet

Energy Acuman LLC

Plug And Abandonment Procedure BRC Madera #001

860' FNL & 1890' FEL, Section 29, 22S, 27E Eddy County, NM / API 30-015-22372

- 1. Hold pre-job safety meeting. Comply with all NMOCD, BLM safety and environmental regulations. Test rig anchors prior to moving in rig if not rigged to base beam.
- 2. Check casing, tubing, and Bradenhead pressures.
- 3. Remove existing piping on casing valve. RU blow lines from casing valves and begin blowing down casing pressure. Kill well as necessary. Ensure well is dead or on a vacuum.
- 4. ND wellhead and NU BOP. Function test BOP.
- 5. P/U 5-1/2" bit or casing scraper on 2-3/8" work string round trip as deep as possible above top perforation at 11,697'.
- 6. P/U 5-1/2" CR, TIH and set CR at +/- 11,647'. Set CR on wireline or tubing. If set on tubing pressure test tubing to 1000 psi. Sting out of CR. Load hole, and pressure test casing to 800 psi. If casing does not test, then spot or tag subsequent plugs as appropriate. POOH w/ tubing.
- 7. RU wireline and run CBL with 500 psi on casing from CR at 11,647' to surface to identify TOC. Adjust plugs as necessary for new TOC. Email log copy to

Brandon Powell at <u>Brandon.powell@state.nm.us</u> upon completions of logging operations.

- 8. Rig up to pump cement down tubing. Pump water to establish rate down tubing.
- 9. Circulate wellbore with 9.5 ppg salt gel.

NOTE: All Plugs Include 100% excess outside casing and 50% Excess inside casing

10. Plug 1 (Morrow Perforations, Casing Shoe, and Liner Top, 11,647'-10,956', 77 Sacks Class H Cement)

Mix 77 sx Class H cement and spot a balanced plug inside casing to cover the Morrow perforations, casing shoe, and liner top.

11. Plug 2 (Wolfcamp Formation Top 8,860'-8,710', 35 Sacks Class H Cement)

Mix 25 sx Class H cement and spot a balanced plug inside casing to cover the Wolfcamp formation top.

12. Plug 3 (3rd Bone Springs Formation Top 8,525'-8,375', 35 Sacks Class H Cement)

Mix 35 sx Class H cement and spot a balanced plug inside casing to cover the 3^{rd} Bone Springs formation top.

13. Plug 4 (Bone Springs Formation Top 5,408'-5,258', 35 Sacks Class H Cement)

Mix 35 sx Class H cement and spot a balanced plug inside casing to cover the Bone Springs formation top.

14. Plug 5 (Casing Shoe 2,668'-2,518', 64 Sacks Class C Cement)

Mix 64 sx Class C cement and spot a balanced plug inside casing to cover the intermediate #1 casing shoe.

15. Plug 6 (Surface Casing Shoe 428'-Surface, 413 Sacks Class C Cement)

Attempt to pressure test the bradenhead annulus to 300 psi; note the volume to load. If BH annulus holds pressure, then establish circulation out casing valve with water. Mix approximately 413 sx cement and spot a balanced plug from 428' to surface, circulate good cement out of casing valve. TOH and LD tubing. Shut well in and WOC. If BH annulus does not test, then perforate at the appropriate depth and attempt to circulate cement to surface filling the casing from 428' and the annulus from the squeeze holes to surface. Shut in well and WOC.

16. ND cementing valves and cut off wellhead. Fill annuli with cement as necessary. Install P&A marker to comply with regulations. Record GPS coordinate for P&A marker on tower report. Photograph P&A marker in place. RD, MOL and restore location per BLM stipulations.

CONDITIONS FOR PLUGGING AND ABANDONMENT

OCD - Southern District

The following is a guide or checklist in preparation of a plugging program, this is not all inclusive and care must be exercised in establishing special plugging programs in unique and unusual cases, Notify NMOCD District Office II at (575)-748-1283 at least 24 hours before beginning work. After MIRU rig will remain on well until it is plugged to surface. OCD is to be notified before rig down. Company representative will be on location during plugging procedures.

- A notice of intent to plug and abandon a wellbore is required to be approved before plugging
 operations are conducted. A cement evaluation tool is required in order to ensure isolation of
 producing formations, protection of water and correlative rights. A cement bond log or other
 accepted cement evaluation tool is to be provided to the division for evaluation if one has not
 been previously run or if the well did not have cement circulated to surface during the original
 casing cementing job or subsequent cementing jobs. Insure all bradenheads have been
 exposed, identified and valves are operational prior to rig up.
- 2. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to a permitted disposal location.
- 3. Trucking companies being used to haul oilfield waste fluids to a disposal commercial or private shall have an approved NMOCD C-133 permit. A copy of this permit shall be available in each truck used to haul waste products. It is the responsibility of the operator as well as the contractor, to verify that this permit is in place prior to performing work. Drivers shall be able to produce a copy upon request of an NMOCD Field inspector.
- 4. Filing a subsequent C-103 will serve as notification that the well has been plugged.
- 5. A final C-103 shall be filed (and a site inspection by NMOCD Inspector to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to Meet NMOCD standards) before bonding can be released.
- 6. If work has not begun within 1 Year of the approval of this procedure, an extension request must be file stating the reason the well has not been plugged.
- 7. Squeeze pressures are not to exceed 500 psi, unless approval is given by NMOCD.
- 8. Produced water will not be used during any part of the plugging operation.
- 9. Mud laden fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
- 10. All cement plugs will be a minimum of 100' in length or a minimum of 25 sacks of cement, whichever is greater. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
- 11. Class 'C' cement will be used above 7500 feet.
- 12. Class 'H' cement will be used below 7500 feet.
- 13. A cement plug is required to be set 50' above and 50' below, casing stubs, DV tools, attempted casing cut offs, cement tops outside casing, salt sections and anywhere the casing is perforated, these plugs require a 4 hour WOC and then will be tagged
- 14. All Casing Shoes Will Be Perforated 50' below shoe depth and Attempted to be Squeezed, cement needs to be 50' above and 50' Below Casing Shoe inside the Production Casing.

- 16. When setting the top out cement plug in production, intermediate and surface casing, wellbores should remain full at least 30 minutes after plugs are set
- 17. A CIBP is to be set within 100' of production perforations, capped with 100' of cement, WOC 4 hours and tag.
- 18. A CIBP with 35' of cement may be used in lieu of the 100' plug if set with a bailer. This plug will be placed within 100' of the top perforation, (WOC 4 hrs and tag).
- 19. No more than 3000' is allowed between cement plugs in cased hole and 2000' in open hole.
- 20. Some of the Formations to be isolated with cement plugs are: These plugs to be set to isolate formation tops
 - A) Fusselman
 - B) Devonian
 - C) Morrow
 - D) Wolfcamp
 - E) Bone Springs
 - F) Delaware
 - G) Any salt sections
 - H) Abo
 - 1) Glorieta
 - J) Yates.
 - K) Cherry Canyon Eddy County
 - L) Potash---(In the R-111-P Area (Page 3 & 4), a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, WOC 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.
- 21. If cement does not exist behind casing strings at recommended formation depths, the casing can be cut and pulled with plugs set at recommended depths. If casing is not pulled, perforations will be shot and cement squeezed behind casing, WOC and tagged. These plugs will be set 50' below formation bottom to 50' above formation top inside the casing

DRY HOLE MARKER REQUIRMENTS

The operator shall mark the exact location of the plugged and abandoned well with a steel marker not less than four inches in diameter, 3' below ground level with a plate of at least ¼" welded to the top of the casing and the dry hole marker welded on the plate with the following information welded on the dry hole marker:

1. Operator name 2. Lease and Well Number 3.API Number 4. Unit Letter 5. Quarter Section (feet from the North, South, East or West) 6. Section, Township and Range 7. Plugging Date 8. County (SPECIAL CASES)------AGRICULTURE OR PRARIE CHICKEN BREEDING AREAS

In these areas, a below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to NMOCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to NMOCD (We typically require a current survey to verify the GPS)

SITE REMEDIATION DUE WITHIN ONE YEAR OF WELL PLUGGING COMPLETION

R-111-P Area

T 18S - R 30E

Sec 10 Unit P. Sec 11 Unit M,N. Sec 13 Unit L,M,N. Sec 14 Unit C -P. Sec 15 Unit A G,H,I,J,K,N,O,P. Sec 22 Unit All except for M. Sec 23, Sec 24 Unit C,D,E,L, Sec 26 Unit A-G, Sec 27 Unit A,B,C

T 19S - R 29E

Sec 11 Unit P. Sec 12 Unit H-P. Sec 13. Sec 14 Unit A,B,F-P. Sec 15 Unit P. Sec 22 Unit A,B,C,F,G,H,I,J K,N,O,P. Sec 23. Sec 24. Sec 25 Unit D. Sec 26 Unit A-F. Sec 27 Unit A,B,C,F,G,H.

T 19S - R 30E

Sec 2 Unit K,L,M,N. Sec 3 Unit I,L,M,N,O,P. Sec 4 Unit C,D,E,F,G,I-P. Sec 5 Unit A,B,C,E-P. Sec 6 Unit I,O,P. Sec 7 – Sec 10. Sec 11 Unit D, G—P. Sec 12 Unit A,B,E-P. Sec 13 Unit A-O. Sec 14-Sec 18. Sec 19 Unit A-L, P. Sec 20 – Sec 23. Sec 24 Unit C,D,E,F,L,M,N. Sec 25 Unit D. Sec 26 Unit A-G, I-P. Sec 27, Sec 28, Sec 29 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 32 Unit A,B,G,H,I,J,N,O,P. Sec 33. Sec 34. Sec 35. Sec 36 Unit D,E,F,I-P.

T 19S - R 31E

Sec 7 Unit C,D,E,F,L. Sec 18 Unit C,D,E,F,G,K,L. Sec 31 Unit M. Sec 34 Unit P. Sec 35 Unit M,N,O. Sec 36 Unit O,P.

T 20S - R 29E

Sec 1 Unit H,I,P. Sec 13 Unit E,L,M,N. Sec 14 Unit B-P. Sec 15 Unit A,H,I,J,N,O,P. Sec 22 Unit A,B,C,F,G,H,I,J,O,P. Sec 23. Sec 24 Unit C,D,E,F,G,J-P. Sec 25 Unit A-O. Sec 26. Sec 27 Unit A,B,G,H,I,J,O,P. Sec 34 Unit A,B,G,H. Sec 35 Unit A-H. Sec 36 Unit B-G.

T 20S - R 30E

Sec 1 – Sec 4. Sec 5 Unit A,B,C,E-P. Sec 6 Unit E,G-P. Sec 7 Unit A-H,I,J,O,P. Sec 8 – 17. Sec 18 Unit A,B,G,H,I,J,O,P. Sec 19 Unit A,B,G,H,I,J,O,P. Sec 30 Unit A-L,N,O,P. Sec 31 Unit A,B,G,H,I,P. Sec 32 – Sec 36.

T 20S - R 31E

Sec 1 Unit A,B,C,E-P. Sec 2. Sec 3 Unit A,B,G,H,I,J,O,P. Sec 6 Unit D,E,F,J-P. Sec 7. Sec 8 Unit E-P. Sec 9 Unit E,F,J-P. Sec 10 Unit A,B,G-P. Sec 11 – Sec 36.

T 21S - R 29E

Sec 1 – Sec 3. Sec 4 Unit L1 – L16,I,J,K,O,P. Sec 5 Unit L1. Sec 10 Unit A,B,H,P. Sec 11 – Sec 14. Sec 15 Unit A,H,I. Sec 23 Unit A,B. Sec 24 Unit A,B,C,D,F,G,H,I,J,O,P. Sec 25 Unit A,O,P. Sec 35 Unit G,H,I,J,K,N,O,P. Sec 36 A,B,C,F – P.

T 21S - R 30E

Sec 1 – Sec 36

T 21S - R 31E

Sec 1 – Sec 36

T 22S - R 28E

Sec 36 Unit A,H,I,P.

T 22S - R 29E

Sec 1. Sec 2. Sec 3 Unit I,J,N,O,P. Sec 9 Unit G – P. Sec 10 – Sec 16. Sec 19 Unit H,I,J. Sec 20 – Sec 28. Sec 29 Unit A,B,C,D,G,H,I,J,O,P. Sec 30 Unit A. Section 31 Unit C – P. Sec 32 – Sec 36

T 22S - R 30E

Sec 1 – Sec 36

T 22S - R 31E

Sec 1 – Sec 11. Sec 12 Unit B,C,D,E,F,L. Sec 13 Unit E,F,K,L,M,N. Sec 14 – Sec 23. Sec 24 Unit C,D,E,F,K,L,M,N. Sec 25 Unit A,B,C,D. Sec 26 Unit A,B,C,D,G,H. Sec 27 – Sec 34.

T 23S - R 28E

Sec 1 Unit A

T 23S - R 29E

Sec 1 – Sec 5. Sec 6 Unit A – I, N,O,P. Sec 7 Unit A,B,C,G,H,I,P. Sec 8 Unit A – L, N,O,P. Sec 9 – Sec 16. Sec 17 Unit A,B,G,H,I,P. Sec 21 – Sec 23. Sec 24 Unit A – N. Sec 25 Unit D,E,L. Sec 26. Sec 27. Sec 28 Unit A – J, N,O,P. Sec 33 Unit A,B,C. Sec 34 Unit A,B,C,D,F,G,H. Sec 35. Sec 36 Unit B,C,D,E,F,G,K,L.

T 23S - R 30E

Sec 1 – Sec 18. Sec 19 Unit A – I,N,O,P. Sec 20, Sec 21. Sec 22 Unit A – N, P. Sec 23, Sec 24, Sec 25. Sec 26 Unit A,B,F-P. Sec 27 Unit C,D,E,I,N,O,P. Sec 28 Unit A – H, K,L,M,N. Sec 29 Unit A – J, O,P. Sec 30 Unit A,B. Sec 32 A,B. Sec 33 Unit C,D,H,I,O,P. Sec 34, Sec 35, Sec 36.

T 23S - R 31E

Sec 2 Unit D,E,J,O. Sec 3 – Sec 7. Sec 8 Unit A – G, K – N. Sec 9 Unit A,B,C,D. Sec 10 Unit D,P. Sec 11 Unit G,H,I,J,M,N,O,P. Sec 12 Unit E,L,K,M,N. Sec 13 Unit C,D,E,F,G,J,K,L,M,N,O. Sec 14. Sec 15 Unit A,B,E – P. Sec 16 Unit I, K – P. Sec 17 Unit B,C,D,E, I – P. Sec 18 – Sec 23. Sec 24 Unit B – G, K,L,M,N. Sec 25 Unit B – G, J,K,L. Sec 26 – Sec 34. Sec 35 Unit C,D,E.

T 24S – R 29E

Sec 2 Unit A, B, C, D. Sec 3 Unit A

T 24S - R 30E

Sec 1 Unit A - H, J - N. Sec 2, Sec 3. Sec 4 Unit A,B,F - K, M,N,O,P. Sec 9 Unit A - L. Sec 10 Unit A - L, O,P. Sec 11. Sec 12 Unit D,E,L. Sec 14 Unit B - G. Sec 15 Unit A,B,G,H.

T 24S - R 31E

Sec 3 Unit B – G, J – O. Sec 4. Sec 5 Unit A – L, P. Sec 6 Unit A – L. Sec 9 Unit A – J, O,P. Sec 10 Unit B – G, K – N. Sec 35 Unit E – P. Sec 36 Unit E,K,L,M,N.

T 25S - R 31E

Sec 1 Unit C,D,E,F. Sec 2 Unit A – H.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III

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1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. **Santa Fe, NM 87505**

CONDITIONS

Action 244175

CONDITIONS

Operator:	OGRID:
J.A. Drake Well Service Inc.	330485
607 W Pinon	Action Number:
Farmington, NM 87401	244175
	Action Type:
	[C-103] NOI Plug & Abandon (C-103F)

CONDITIONS

Created By	Condition	Condition Date
john.harrisoi	Approved w/ conditions. Please add plug to cover Canyon top @ 10330'	8/1/2023